Field Naturalists' Club of Ballarat *Inc*

RARE KOALA TWINS WITH MUM!

-but for your December poser, can you say why Koala twins are so rare?

Picture from Herald Sun

Meetings are held at the Ballarat Horticulture centre, corner of Gregory and Gillies Streets, ie. the NW corner of the Botanic Gardens, commencing at 7-30pm

Excursions depart from Creswick Plaza at 9-30 am, unless specified otherwise.

Committee: Claire Dalman (President).. , Greg Binns (Vice President).. , Pat Murphy (Secretary).. , John Gregurke (Treasurer).. , Brian Andrews (Editor).. , Helen Burgess, Lyndsay Fink, Brian Gavin, Carol Hall, Margaret Rotherham.

Postal Address: PO Box 328W, Ballarat West,3350

DIARY DATES

Fri 4th Dec. Meeting. *An Approach to the Study of Invertebrates.* Speaker Mr Dave King, member Geelong F.N.C.

Sun 6th Dec. Excursion*. *Lower Stoney Creek Reservoir, Brisbane Ranges. BYO Picnic Tea.* Leaders Pat and Bill Murphy. DEPART 1-30 pm.

Thur 21st Jan. Committee Meeting. Lyndsay Fink's, Old P.O. Meredith. 7-30 pm.

Fri 5th Feb. Meeting. *A Marine Biology Topic - TBA.* Marine Research Group F.N.C.V.

Sun 7th Feb. Excursion. *Queenscliff, Pt Lonsdale area.* Leader Margaret Rotherham.

WHAT GROWS WHERE AND WHY.

Leon started his talk with a geological map of Victoria - and explained that the most important factor in "what grows where" is the geology of the area.

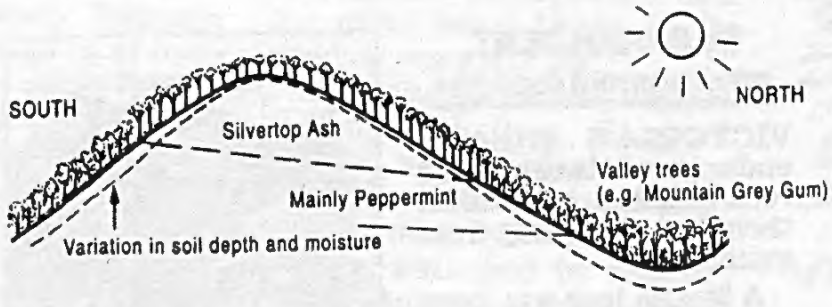
He then showed a geological map of the Mornington Peninsular, pointing out that there were four distinct areas. One of the areas was limey sand near the beach and a slide of the area showed snow gums growing there! We were at first surprised but then Leon went on to explain that they were always in such areas - long before they were uplifted to their alpine environment. We then moved on to Authur's Seat, the trees were quite different - there was no lime in the soil! We then looked at a junction between volcanic and sandy soils. The volcanic area was used for grazing - because of its fertility - the area was all grass, whereas the sandy area was covered in bush - dominated by banksias.

We were shown moonah which likes limy, sandy soils in dry areas and has an isolated occurrence at Long Forest - we saw plenty on our excursion the next day. We were shown bog gum *E kitsoniana* which occurs in near-coastal sites, usually on poorly-drained sandy or alluvial flats. I have found this tree to be one of the fastest growing windbreak trees on our block at Durham Lead.

With a slide taken from the top of Mt Oberon we were able to view the Tidal River area. Close inspection revealed that p1

the dunes inland from Norman Bay ran in two distinct directions. Dunes near the beach ran North - South, parallel to the beach. Dunes further inland ran East - West. The different areas were deposited at different times and on close inspection had quite a few subtle differences in vegetation. The N-W dunes had coast teatree whereas the E-W dunes had silky teatree. Similar variations were noted for wattles and beard heaths. At the junction of the two areas hybridization occurs between the closely related species. Disturbance (ie earthworks) tends to increase the amount of hybridization and hence reduces the areas of pure specimens - an undesirable result.

Several examples of variation due to aspect and position on slopes were given, an example (taken from his book), is shown opposite. Such variations can be used to determine directions in the bush.



~from "Trees of Victoria ..."
by Leon Costermans.

An even better direction indicator was the grass tree, its brown spike covered with flowers on the north side - but none on the south!

We went on to see pockets of "dry rainforest" adjacent to the Mitchell River. We went to the upper reaches of the Snowy River to see the white cypress-pine and the black cypress-pine etc. We saw the rectangular fault patterns in the granite rock of Mt Buffalo and black sallee in the poorly drained frost pockets.

Leon discussed the effect of fire. A slide showed a boundary between alpine ash and snow gums. The snow gums were growing well but the alpine ash had been killed! Apparently the area was burnt in 1926 and both species were able to regrow - the mountain ash from seed and the snow gum from its root. However when another fire came through in 1939 the mountain ash did not regenerate - the trees were not old enough to have developed seeds! Leon was somewhat critical of current controlled burning regimes and the detrimental effect on regeneration. Springtime burning produces little regeneration due to lack of seed on the trees and in Autumn the seed has already dropped and is burnt in the fire. Although not usually done because of the risk factor, Summer is in fact the most desirable time for burning - for regeneration at least!

We finished up at Hattah, in the mallee. Black box

PTO

was growing on the grey soil and mallee was growing on the sand dunes. Redgums were growing from the waters edge to the upper levels of previous floods - obviously how we regulate future flows will have major influences on redgum regrowth.

It was a fine talk and many of us accepted Leon's invitation to buy his book at a special discount price! Thanks Leon!

BDA

FROM THE PAPERS

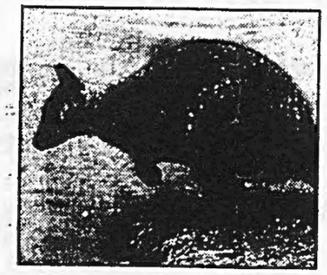
Joey hope for species

By SARAH DENT, environment reporter

VICTORIA'S critically endangered brush-tailed rock wallabies have taken their first step away from extinction.

A female joey was born seven weeks ago — the first successful birth under a joint captive-breeding program between Healesville Sanctuary and the Adelaide Zoo.

A young male was brought in from the wild in May 1997 and was successfully mated with a young female in Adelaide.



Hope: a brush-tailed rock wallaby.

A Healesville Sanctuary spokeswoman said the entire captive population of Victorian brush-tailed rock-wallabies was originally kept at Healesville.

But she said the population was divided between two sites to safeguard against the possibility of the breeding population being wiped out in one location.

Captive Management Working Group convener Merril Halley said the breeding success was a milestone for the recovery program of the critically endangered species.

The joey, reported to be doing well, will stay in the pouch for six months.

Spot the leopard

NEW DELHI — A leopard sneaked into a house in northern India, climbed on to a bed and watched television before dozing off, witnesses said.

The owner of the house thought her four-year-old son was referring to a TV documentary when he came into the kitchen and said there was a "tiger" in the room.

Forest department officials were called and they tranquillised the leopard with a dart pistol before taking it to a zoo.

Submitted by B.C.

Birds fall prey

WEDGE-tailed eagles and other birds of prey appear to have become the latest casualties in the war on rabbits, three studies reported in *New Scientist* show.

The deadly calicivirus has robbed the birds of their favorite food, with one study showing wedge-tailed eagles had not bred for three years in a large area of South Australia.

Up close and personal

By GREG THOM, science reporter

LOOKING more like some menacing space alien from the film *Starship Troopers*, this monstrous creature is just a humble ant — up close and personal.

The digital technology allowing such razor-sharp images in color can also enhance objects as tiny as dust mites, a human hair or a fly's eye.

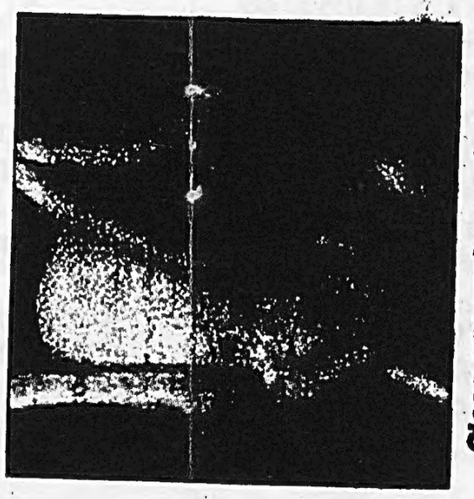
The breakthrough in electron microscope technology was developed in Victoria and is now being marketed around the world.

The project is just one of 100 Australian-made innovations on display at a major scientific exhibition and conference that starts in Melbourne today.

Manufacto.98 at the Melbourne Exhibition Centre will provide a showcase for the vast range of research and development projects being undertaken in universities, research institutes and small companies around the country.

Organised by the CSIRO, the exhibition aims to bring together scientists and researchers with industry and business.

CSIRO deputy director Bob Frater said: "Australia is emerging as a world leader in many fields of high technology".



Close encounter: ant's head.

LET'S FIGHT GORSE WITH ALL OUR MIGHT

In Victoria gorse is common in the central highlands, the south-west and parts of Gippsland. A 1980 survey of the distribution of noxious weeds in Victoria determined that gorse occupied an estimated total area of 948,000ha, with medium to dense infestations found on 143,000ha. Gorse is a serious environmental and agricultural weed in southeastern Australia, particularly Tasmania and Victoria, because of its invasiveness and the difficulty and expense of controlling it by conventional methods. As a result, it is seriously affecting the resilience and sustainability of the land on which it is established. It invades bushland, reducing access and conservation values and threatening the survival of rare and endangered plants and plant communities. In forestry plantations it reduces tree growth and survival and, on pastoral land, it significantly reduces pasture and animal productivity and may form thickets that prevent grazing by animals and access to streams. It also provides habitat and shelter for vertebrate pests and increases fire hazards in bushland, forestry plantations and urban areas.

Biological control currently offers the only long term solution to the gorse problem and the chance of preventing further spread and returning land to sustainable and productive use. Biological control of gorse was initiated in the southern hemisphere by New Zealand in the early 1930s and again in the late 1970s.

Releases of the gorse spider mite (Tetranychus lintearius) in Tasmania and Victoria are planned for this spring and summer. This mite has been found to be the invertebrate species causing the most damage to gorse in Europe and is therefore considered to be the most promising of the potential biological control agents which may be imported into Australia. The tiny red mites form large colonies which migrate *en masse* over the green foliage of gorse plants, extracting mesophyll cell contents, and leaving behind browsed shoots that eventually die. The mites breed quite rapidly under warm conditions and may complete up to six generations per year. dispersal occurs during summer, and mainly results from the mites being blown in the wind on strands of silk.

The gorse spider mite, originally imported from Cornwall, England, was first released in New Zealand in 1989. The mite established extremely well, except in areas characterised by relatively warm winters and high rainfall. Subsequently five new strains of the mite were collected from coastal Portugal and northwest Spain, where the climate was better matched to those areas in New Zealand where the mite failed to establish.

Three further agents will undergo investigation for release into Australia: the gorse thrip (Sericothrips staphylinus), the soft shoot moth (*Agonopterix ulicetella*) and the gorse pod moth (*Cydia succedana*). Since these agents have been released in New Zealand, the host specificity testing process required prior to their release in Australia will be conducted by Manaaki Whenua Landcare Research New Zealand Ltd. It is envisaged that the testing will be completed over the next three years.

The Australian project aims to set up a 'biocontrol agent distribution network' for the release of gorse agents as they become available. Network collaborators will largely consist of local government, Landcare facilitators and community/industry groups and will participate in the release, monitoring and redistribution of agents.

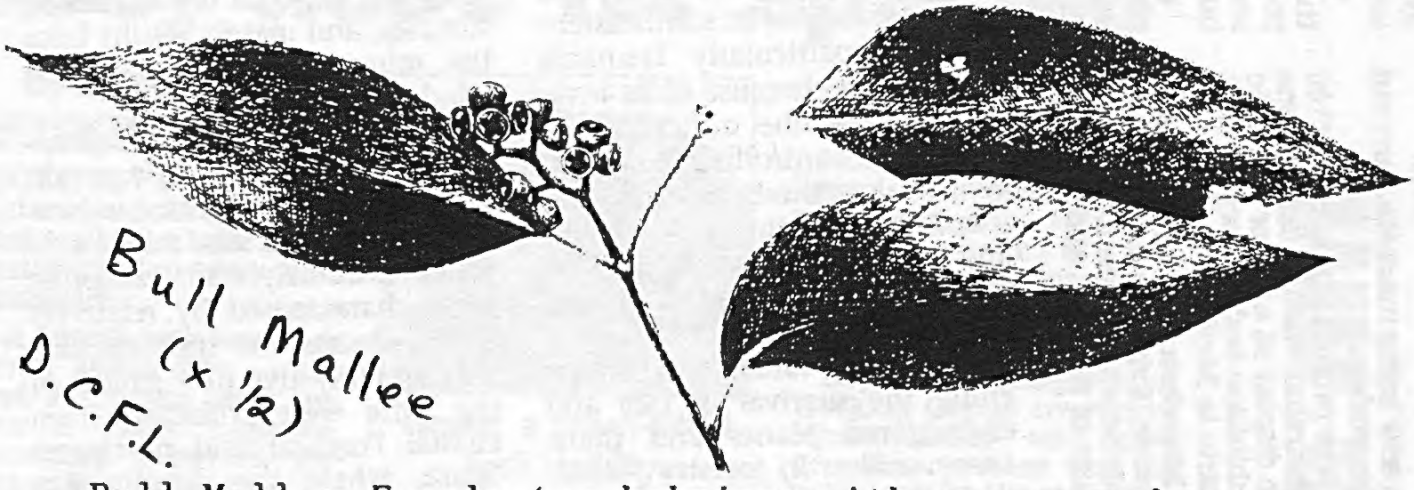
(Source: *Under Control*, Pest Plant and Animal Management News, No. 6, July 1998)

From 'The Central Country Times' - Submitted by M.R.

LONG FOREST FLORA RESERVE EXCURSION...7TH NOV.

Arid vegetation grows close to Ballarat! Visiting Long Forest Reserve at the end of a dry winter clearly demonstrated this. The dam near the car park will be an important source of water for birds during the summer.

Brian had planned a walk along the Coimadai Creek so while a car shuffle was being organised we looked at the visitor information. There is a brief introduction of the flora and fauna of the reserve on the display boards. The sectioned and polished connection between parasitic mistletoe and its host tree was interesting.



Bull Mallee *Eucalyptus behriana* with sparse understory dominates the high ground on top of the ridge. Plants in flower were Sweet Apple-berry *Billariera cymosa* and Pink Purslane *Calandrinia calyptata.* As the track dropped down into the gully Red Box *E polyantemos* trees that were in flower appeared. Close to the creek was a band of Blue Box *E bueriana,* which prefers deep moist soil. Identification of the main trees was made easy with Leon Costermans leading us through the key features that are clearly illustrated in "Trees of Victoria". Other eucalypts that we identified were Yellow Gum *E leucoxylon,* Yellow Box *E melliodora* and Grey Box *E microcarpa.*

We had lunch under Manna gums *E viminalis* along the creek while watching Superb Blue Wrens along the creek and Yellow-tufted Honeyeaters and Yellow Robins in the trees. The distinctive calls of three species of frogs were heard. Wirilda *Acacia retinodes* and Black Wattle *A mearnsii* were flowering near the creek. Rushes, Cumbungi, Woolly Teatree and a Callistemon were confined to the creek bed. Crossing the creek was hazardous and cooling for Joan.

Many of the eucalypts carry Box Mistletoe *Amyema miquelli* and we had a good view of a male Mistletoe Bird perched on a dead branch. A White-winged Chough was disturbed from its nest and several Red-browed Finch nests were seen in the shrubs.

Other birds observed included Fantailed Cuckoo, Rufous Whistler, New Holland Honeyeater, Striated Pardalote, White-throated Treecreeper, Sulphur-crested Cockatoo and Crimson Rosella.

Long Forest is interesting because of the flora that is unusual for southern Victoria. Although only a small reserve surrounded by agricultural land and housing development there is little weed invasion. There are a few Prickly Pear, with some Box Thorn and thistles along the creek. Thanks to Brian and Leon for an interesting and informative excursion.
JEG

THE LEONID METEOR SHOWER

Several members got up in the middle of the night to witness the Leonid meteor shower - caused by the Earth passing through the wake of comet Temple-Tuttle. Those of us at Cummins Road saw about 20 meteors, fewer than expected, 5 were small but about 15 were well worth seeing. We also spotted a satellite. Most meteors came from the NE - as predicted, but some came from the SW and some even came from the S! At 3oC, with a strong wind blowing I appreciated Claire's heat bag up my jumper. Cups of hot tea and Claire's Tim Tams made the wait between meteors quite bearable. For those who missed out there will be a repeat in 33 years time!
BDA

ANNUAL CLUB CAMP-OUT REPORT

For the thirteen members who attended, the weekend of November 20-22 in the Southern Grampians and beyond was most enjoyable. 'The Bunkhouse' in Dunkeld was a comfortable base and the scenic and interesting routes over the Western plains, coming and going - with grasslands, wetlands (and some excellent crops!) were good bonuses. Some hundreds of Black Swans on Chinaman's Swamp near Streatham was an exciting sight. Saturday's varied excursion provided much of interest. West of Dunkeld there was a pause to view the remains of a former flax mill near Strathkellar, then after passing through Hamilton, a stop at Nigretta Falls on the Wannon River to enjoy the cataracts and scenic surrounds. A longer stop at the Wannon Falls Reserve provided good observations in flora and bird life. The Wannon was flowing sufficiently to provide quite a spectacular head of water over both falls.

The destination was the Peter Francis Points Arboretum on the hillside overlooking Coleraine, and this proved to be quite an eye opener. (The party had called at the Chocolate Factory Shop in Coleraine for sustaining rations en route!) The arboretum, on the 37 hectare site, is described as containing

12 000 plants including 2 000 species. Of these there are some 500 Eucalypt species and it has the status of 'Official Eucalypt Collection for Australia'. There are also a number of rare and endangered grevillea species. The range of trees and shrubs from many Australian habitats, many flowering, gives a most impressive display.

Sunday's brisk dawn with sun glistening on heavy dew, against the back drop of Mounts Sturgeon and Abrupt, was quite beautiful and ushered in another ideal day for bush walking. An extended morning session was spent climbing the Piccaninny to the north of Dunkeld. The bushland still offered many flowering shrubs and plants and enough bird life to cause eyes to be elevated from the forest floor from time to time! Good views, two echidnas and a shingle-back lizard provided further variety. Of the seven orchid species observed in various stages of flowering perhaps the most exciting were *Thelymitra fusco-lutea* (Blotched Sun Orchid), *Caleana major* (Large Duck Orchid) and *Caladenia iridescens* (Bronze Caladenia).

We are most appreciative of Claire's organization and arrangements, which ensured the success of the weekend event.

GWB

NOVEMBER POSERS...A MIXED TRIO.

1. L to R the orchid names should have read :- *Lyperanthus nigricans, Acianthus fornicatus, Pterostylis ophioglossa, Caladenia carnea and Pterostylis nutans.* Investigation revealed that the book which I took the picture from was the source of the error!

2. When Helen posed this question I immediately replied that it was to stop surface water flowing down into the entrance holes of their nests. John quickly put forward the argument that the water would flow through the sand granules - this stopped debate on the issue! However later on I remembered that sand bags are used in levee banks. Maybe moderate levels of water are held back as a result of surface tension between the sand and the floodwater. This poser would be a good investigation for someone next time we have a summer storm!

3. Caterpillars are vegetarians, are'nt they!? Imagine my surprise when browsing through a back issue of National Geographic (Aug 1983) I came across the story of a photographer trying to obtain pictures of an inchworm *Eupithecia staurophragma* eating. He presented the inchworm with leaves to eat but they remained untouched. Imagine his surprise when he slipped in a fly and the inchworm grabbed it and devoured it! I'm still waiting to find out what Aussie ones eat! --- are they predators as well?

BDA